

GDST Activities for Implementing Traceability Systems for Fish and Fishery Products (Global Dialogue on Seafood Traceability)

14th July 2026



GLOBAL DIALOGUE
on Seafood Traceability



Presentation Agenda

- Brief introduction to Global Dialogue on Seafood Traceability (GDST)
- Market & investor support for GDST
- Level setting – what is traceability & brief history
- Digitization
 - Benefits
 - Interoperability – benefits of different approaches
- The GDST Standard
- Digital Transformation journey – Industry & Governments
- Government engagement
- Non-seafood commodities – cross commodity scaling
- Global trends & regulatory pillars
- GDST knowledge resources – GDST tools & tests
- Breakout group questions & feedback
- Questions & Answers



GDST Today

134 partners of which 5 seafood certification standard owners, 32 software solutions and 20 NGOs are partners

Est. 2017 and transitioned to industry not for profit foundation in 2022 for legacy public benefit

Launching modular standard on 1st September 2026 to allow soy, palm, rice and other components of aquafeed to be developed (independent of that purpose beef & leather module already underway)

Established capability test to demonstrate software solution compliance with standard – 15 capable solutions and 170+ solutions in some stage of engagement

Working with 12+ governments including Indonesia, EU member states, USA, Peru, Ecuador, Chile, Mexico

Support from FAO, UN Global Compact and UN Transparency Protocol

Whilst traceability is in the name – it is about digital interoperable data exchange enabling traceability & transparency



Adoption

'Interoperability using the GDST standard will be the most meaningful change to traceability to date, and I cannot emphasize enough how essential this is for our entire industry.' Steve Philips , Wegmans Food Markets



3rd Party Certification Standard Holders in Support of the Global Dialogue on Seafood Traceability (GDST)

A Call to Action: [\(link\)](#)

We, the undersigned certification standard holders, encourage all our certificate holders and partners to explore **the GDST journey** by:

- **Learning about the GDST** and the benefits interoperable digital data exchange and traceability can provide your business.
- **Mapping your supply chains** to understand data flows and traceability gaps;
- **Assessing the software and hardware systems** currently used to manage traceability and certification information; and
- **Encouraging your technology providers** to collaborate with the GDST and pursue **GDST-verified capability**, ensuring that their systems can exchange standardized digital traceability data.

Signatories of Call to Action:

Marine Stewardship Council – [Traceability Enhancement Project](#)

Global Seafood Alliance – [Prism Platform](#)

MarinTrust – chain of custody standard development and [traceability data](#)

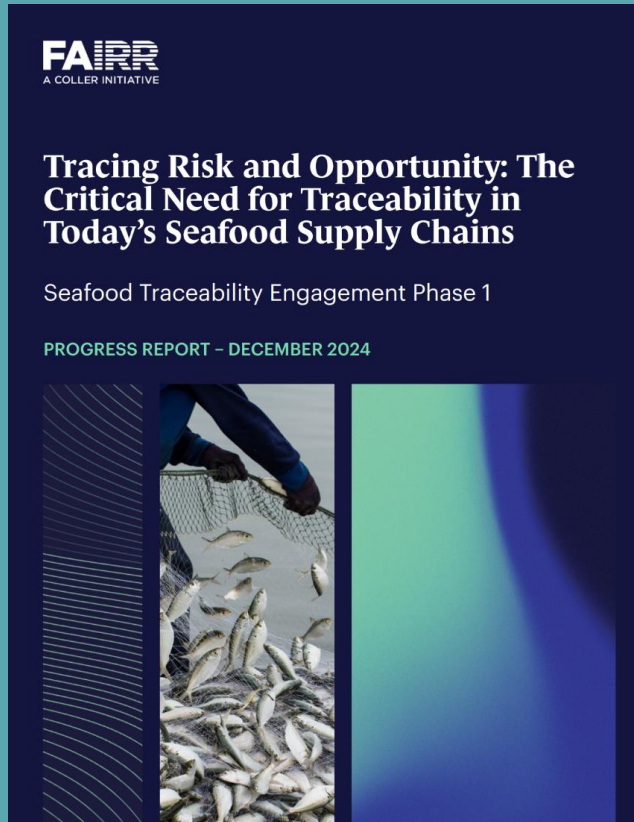
Aquaculture Stewardship Council - [TraceASC](#)

Published Feb 2026

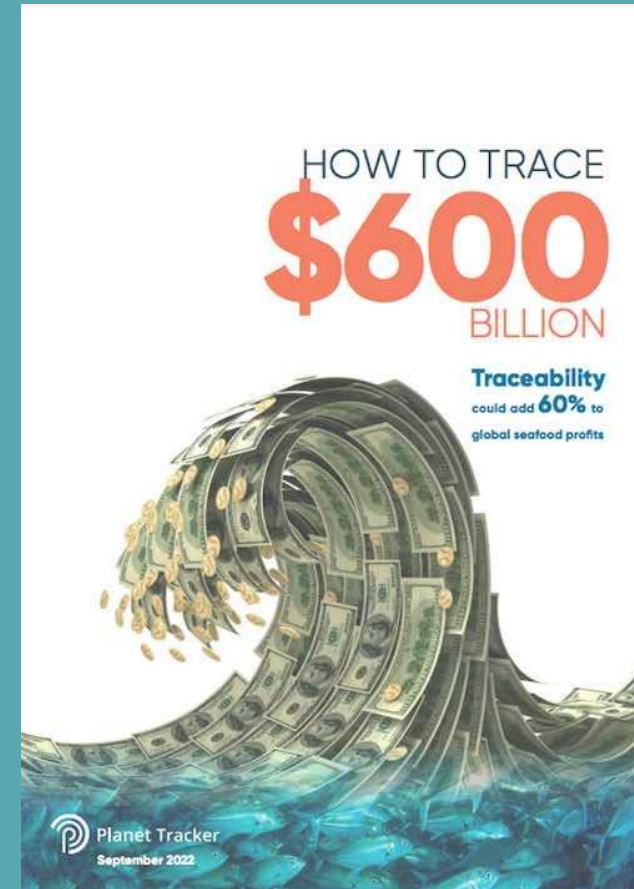




FAIRR & Planet Tracker Reports



FAIRR report [link](#)



Planet Tracker report [link](#)

Reasons why finance and investors are interested

- FAIRR represents 45 investors in seafood with \$9.66 trillion in assets
- Allows companies to manage risk
- Obtain full insight – lack of complete data informing decisions
- Leads to bottom line profitability
- Enables investment in supply chains as weaknesses/ risks known
- Drives supply chain resilience
- Facilitates corporate commitments to be implemented
- Provides data to inform investment in supply chain source sustainability



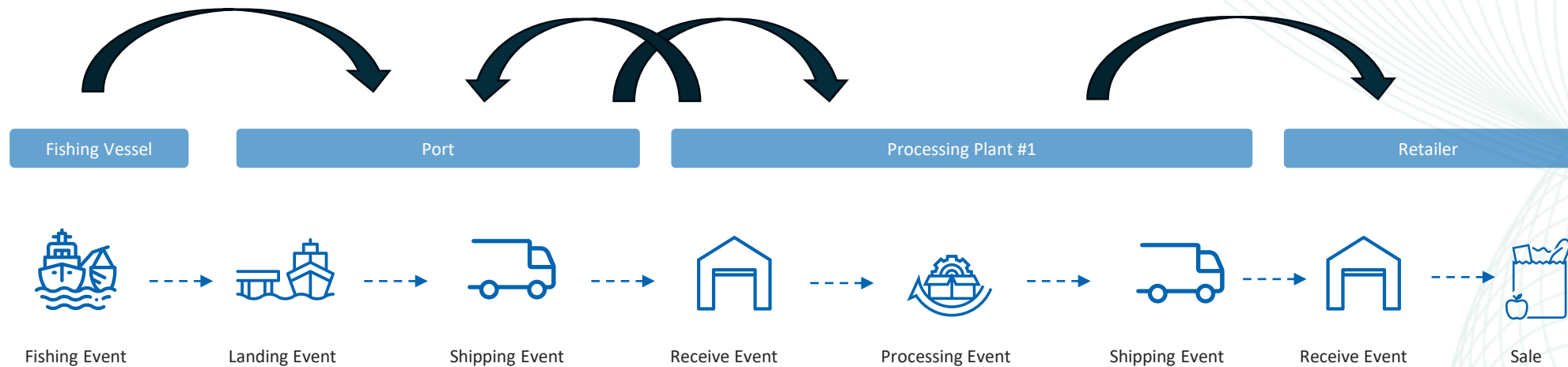
Bringing Food Safety Traceability into a Digital World

GDST Vision: *A world where universally adopted, digital traceability promotes trust in fishery and aquaculture supply chains.*

GDST Mission: *To champion and advance the standardization, adoption, and implementation of interoperable, digital traceability through global collaboration, dialogue, and practical tools.*

The Key challenge is not LACK of Data ...

.. the key challenge is how we effectively share data on critical events through the supply chain with inconsistent language & data formats ... and then addressing data (In)completeness



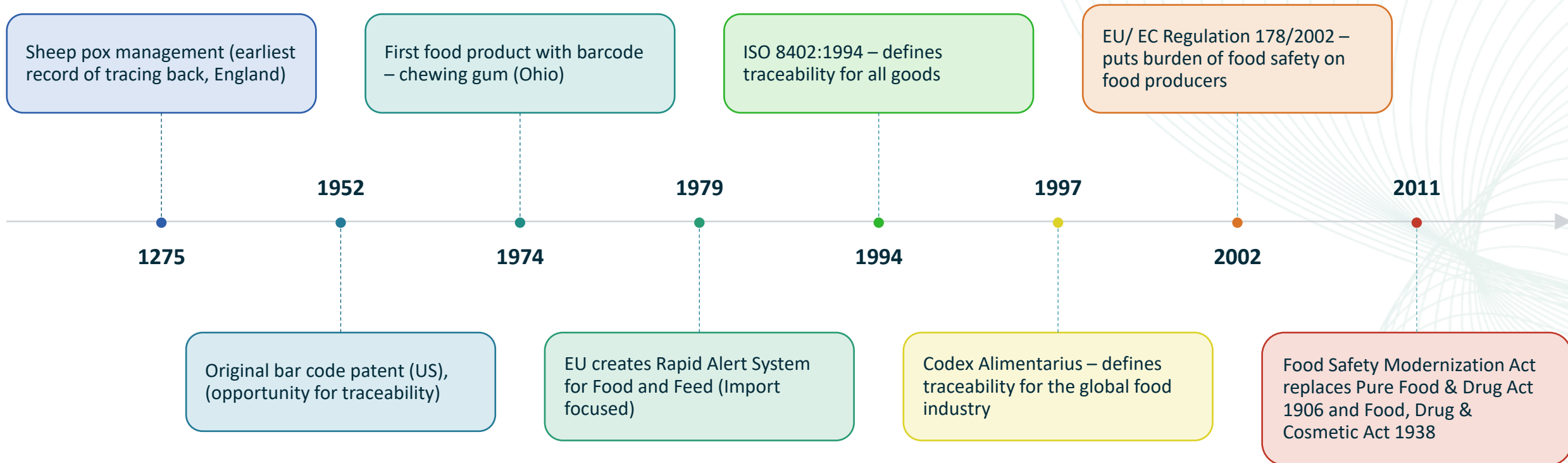
A shared Industry vision on traceability data exchange through cross sector collaboration is key.

Level-Setting What Traceability Is (and Isn't)

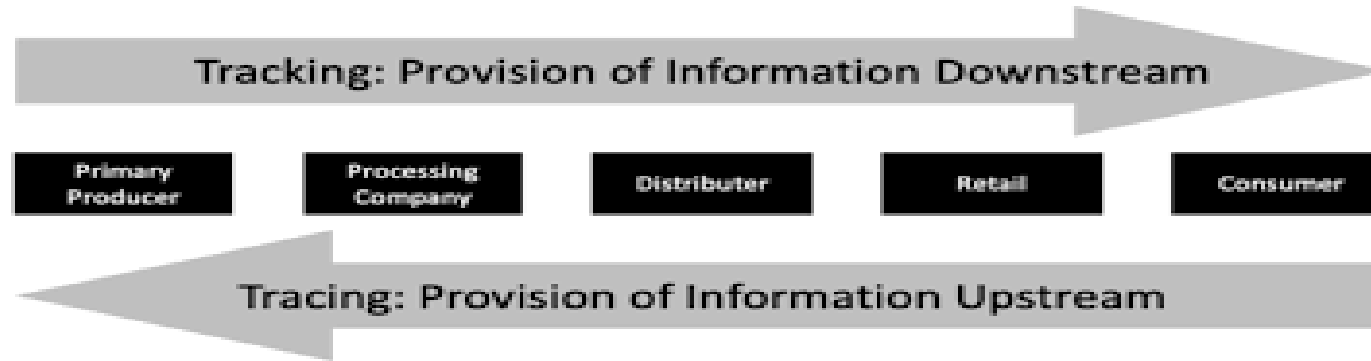


GLOBAL DIALOGUE
on Seafood Traceability

Brief History of Food Traceability



Tracking, Tracing & Event Based Traceability



- **Event-based traceability** breaks down complex supply chains into a series of events – like harvesting, shipping, or receiving – that are common to all commodities. The practice of recording data at each of those events as a product moves through its supply chain is known as event-based traceability.
- **Critical Tracking Event (CTEs)** are events in a supply chain where data capture is necessary to maintain traceability; these are usually critical points of transfer or transformation. The entity that performs each event is the entity responsible for capturing the data associated with the event -> THE WHERE
- **Key Data Elements (KDEs)** are the data elements that must be captured at each CTE to successfully trace a product and/or its ingredients through the supply chain -> THE WHAT
- A shared approach to traceability practices reduces repetitive data collection, improves data reliability, and makes traceability more affordable and accessible to all stakeholders.

Motivations for Food Traceability

Consumers: their safety needs in terms of health and well-being, their expectations in terms of information about the food they are eating.

Consumer expectations may include: expiration date, product composition, geographical origin, ideology (health, body image, nutrition), allergic reaction

Food professionals: risk management, crisis management (recall), define limits of liability, a tool to establish a relationship of trust with consumers.

Authorities: A means of risk prevention, method of localization and expertise in case of food crises.

Food companies: To ensure continuity in the supplier's traceability chain to consumers and vice versa by optimizing and streamlining the physical flow of goods and information

Building Blocks For Effective Traceability

- CTEs & KDEs

- **Critical Tracking Events (CTEs)** - Point in a supply chain where data capture is necessary to maintain traceability.
- **Key Data Elements (KDEs)** are the data that must be captured at each CTE to trace a product through the supply chain



Event based traceability came from pharmaceutical industry & adopted by FAO in 2012

We Are Using “Traceability” to Mean Different Things

One of the biggest challenges in seafood traceability today is that we are using the word ‘traceability’ to describe very different types of data.

- Retailers are asking for more than traceability
- Regulations require different data
- Industry uses one word for all of it
- NGOs conflate traceability & transparency

This results in:

- Confusion
- Duplication
- Inefficiency
- Frustration

Not All Data is Traceability Data

Data	Type
Vessel Name	Traceability
Species	Traceability
Catch Area	Traceability
Certification Status	Assurance
Carbon Emissions	Assurance
Gear Type	Compliance

Digitization Adds Complexity, Threat & Opportunity

- Digitization is
 - Data captured electronically
 - Stored in systems
 - Easier to manage internally
- Not all digital data is usable
 - Spreadsheets
 - PDFs
 - Emails
- Not structured
- Not easily shared or interoperable

But standardised digital data brings threats by identifying gaps, inconsistencies & highlights unknowns

Traceability in a food safety context means 1 up, 1 down

Modern traceability requires data that can be shared and used across systems – irrespective of need or meaning

Catch documentation schemes are a part of end-to-end product traceability

Global Trend: Enhanced Traceability & Transparency in Seafood Supply Chains

- **IUU regulations:** Import control schemes (EU, US) require catch documentation and traceability to combat illegal fishing, which accounts for ~20% of global catch
- **EU IUU Regulation (1005/2008):** Requires a catch certificate for all wild-caught seafood imported into the EU, ensuring legality from vessel to border.
- **EU CATCH System (2026 Update):** Effective January 10, 2026, the EU requires mandatory use of the IT tool CATCH for digital, paperless submission of catch certificates to combat illegal fishing.
- **Revised Fisheries Control System (2023/2842):** Mandates full digital traceability "from net to plate" for fresh and frozen products, with extensions to processed products (e.g., canned fish) planned by 2029.
- **UK Fish Export Service (FES) & Post-Brexit Rules:** From Jan 8, 2026, the UK requires new, updated, and digitized IUU documentation for all seafood exports to the EU.
- **United States (USA)**
- **Seafood Import Monitoring Program (SIMP):** A risk-based program requiring importers to report key data elements (KDEs) at the point of entry regarding the harvest and chain of custody for certain priority seafood species.
- **FDA FSMA 204 (Food Safety Modernization Act):** A new traceability rule requiring businesses to maintain specific tracking data throughout the supply chain, with compliance required by January 20, 2026.
- **Labour regulations:** Growing scrutiny on forced labour and human rights abuses at sea is pushing traceability as a due diligence tool
- **EU CSDDD:** Expands mandatory corporate due diligence across supply chains, requiring companies to identify and mitigate environmental and human rights risks
- **Japan's Act on Ensuring the Proper Distribution of Domestically Produced Fish (2020/2022):** Japan implemented a catch certificate scheme for specific species (e.g., Squid, Mackerel, Sardine) to strengthen import controls, modelling it on the EU system

Overall trend: Convergence toward digitised, standardised, end-to-end traceability systems driven by regulators, investors, and markets

Digitization

Digitization can transform how businesses and governments manage data, enabling efficient sharing and advanced analysis.

However, without carefully considering how it integrates across systems, it can create more issues with data, leading to increased costs, time, and effort.

Benefits of Digitization

Production

- Automates data collection processes, reducing errors and saving time.
- Provides transparent records for buyers and regulators, opening access to markets.

Regulatory, Logistics, and Exports

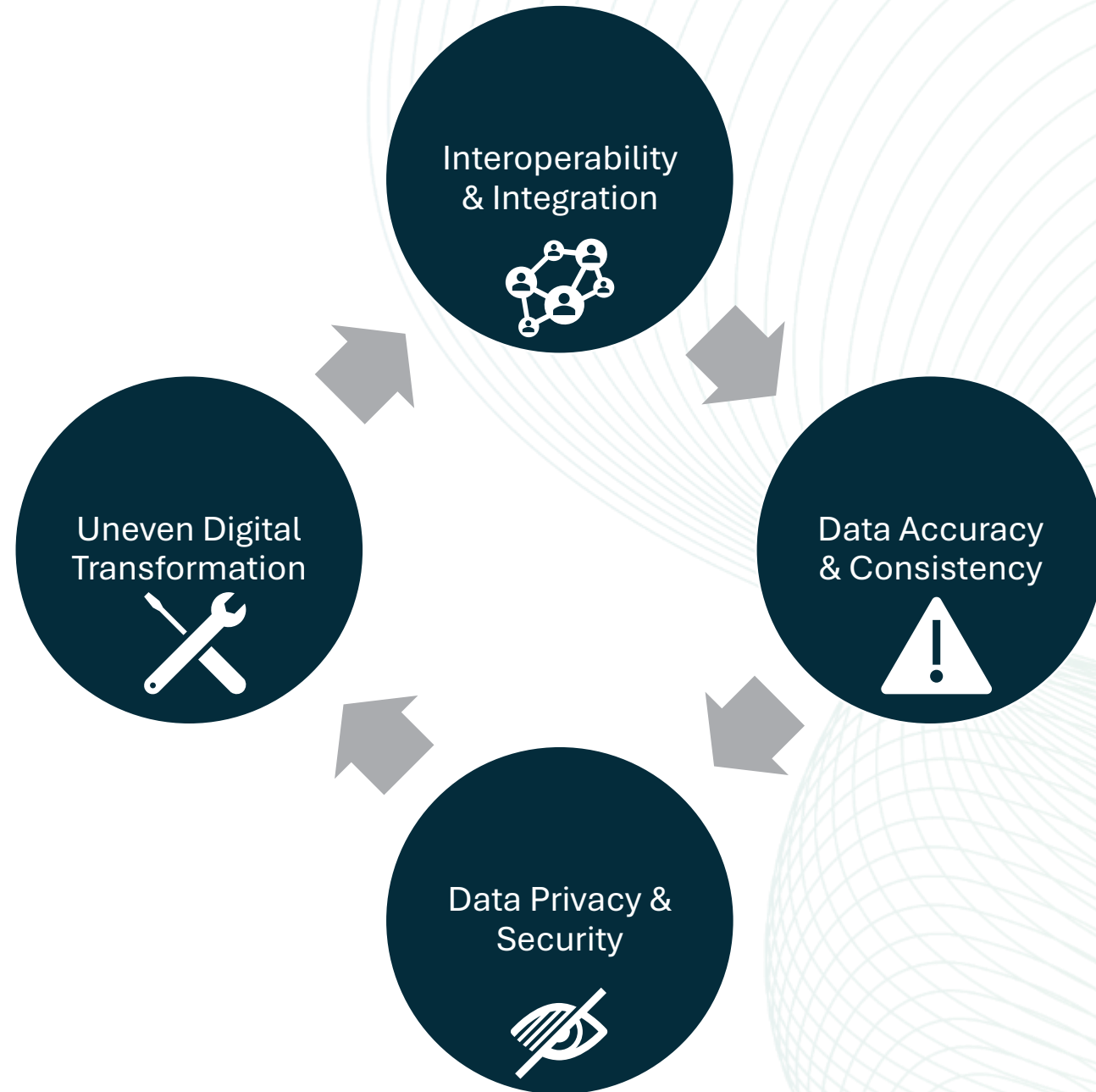
- Enables tracking of product origins and conditions throughout the supply chain.
- Integrates data from multiple supply chain entities for more efficient supply chain management.

IT and Tech Providers

- Facilitates the development of interoperable systems that cater to multiple clients.
- Digitization creates demand for innovative tools and platforms, driving business opportunities.

Barriers to Digitization

While addressing challenges like data accuracy and privacy is important, the true key to successful digitization is **ensuring data is accessible, actionable, and interoperable for all stakeholders.**

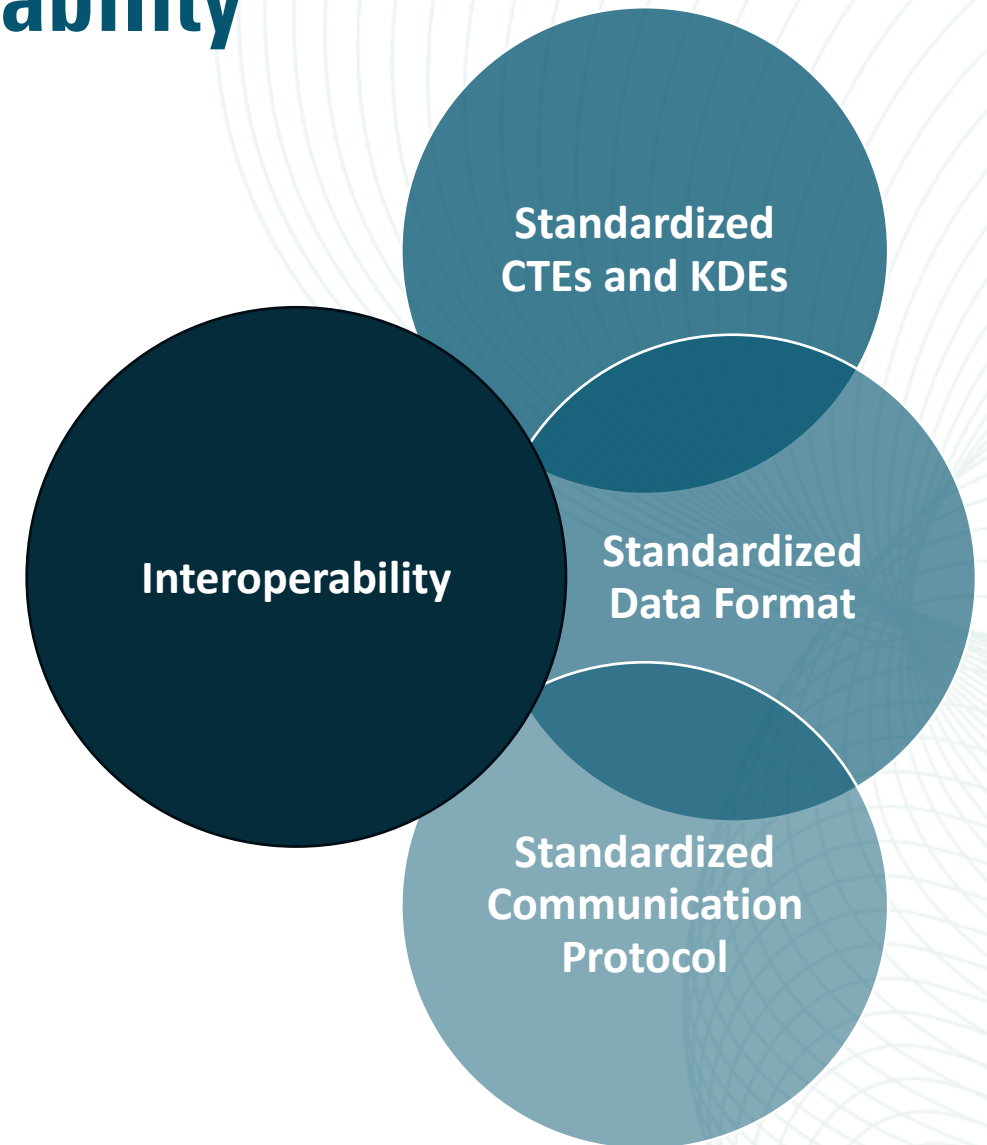


... But we need digital interoperability

Interoperability is the ability of software systems to exchange and interpret data without the need for human intervention.

When technology solutions follow a common approach to data collection, formatting, and exchange it allows companies to choose the technology solution that makes business sense for them.

Digital can be email, PDF, spreadsheet & photograph – without a standard with which to define them they are not interoperable



Approaches to Interoperability

Single System Approach

Beneficial for supply chain owners; burdensome for everyone else.

Customization

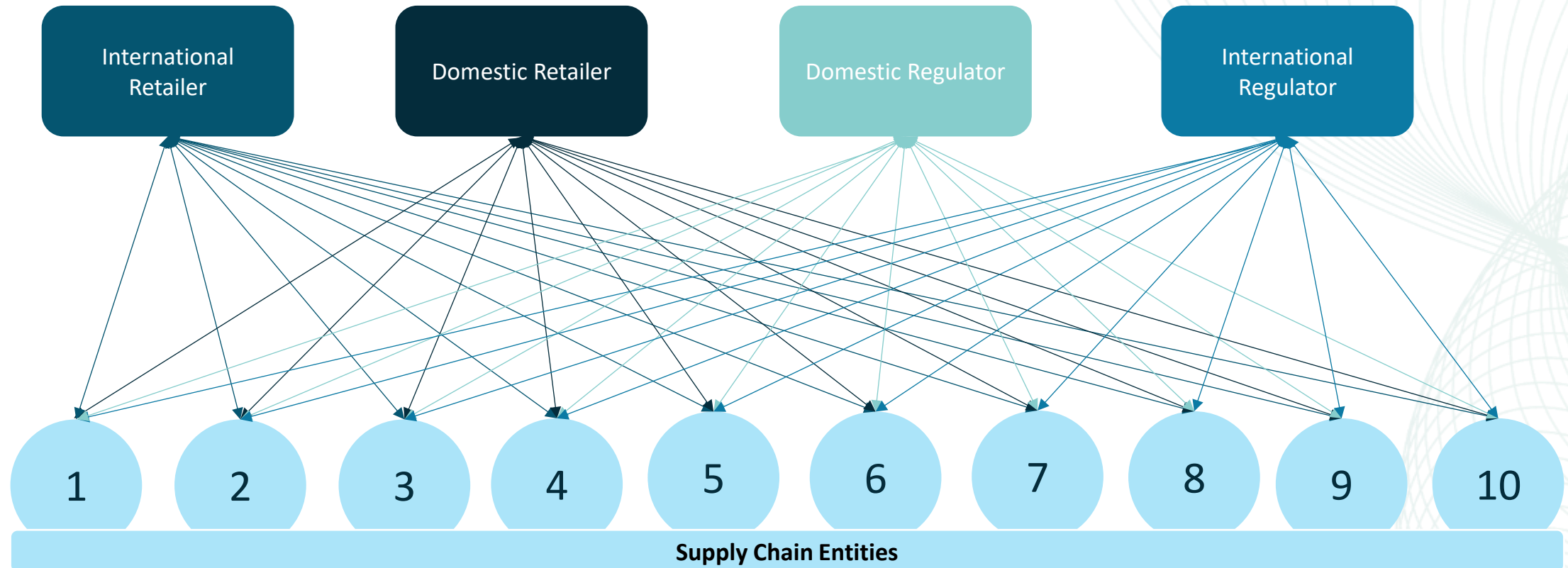
Feasible for small groups, but not scalable.

Standardization

Necessary for global interoperability

Single System Approach

The single system approach simplifies data exchange for supply chain owners but creates issues like higher costs from multiple software licenses, limited usability for upstream companies, inefficiencies when primary suppliers input data for unwilling secondary suppliers, and a lack of scalability for broader supply chain needs.

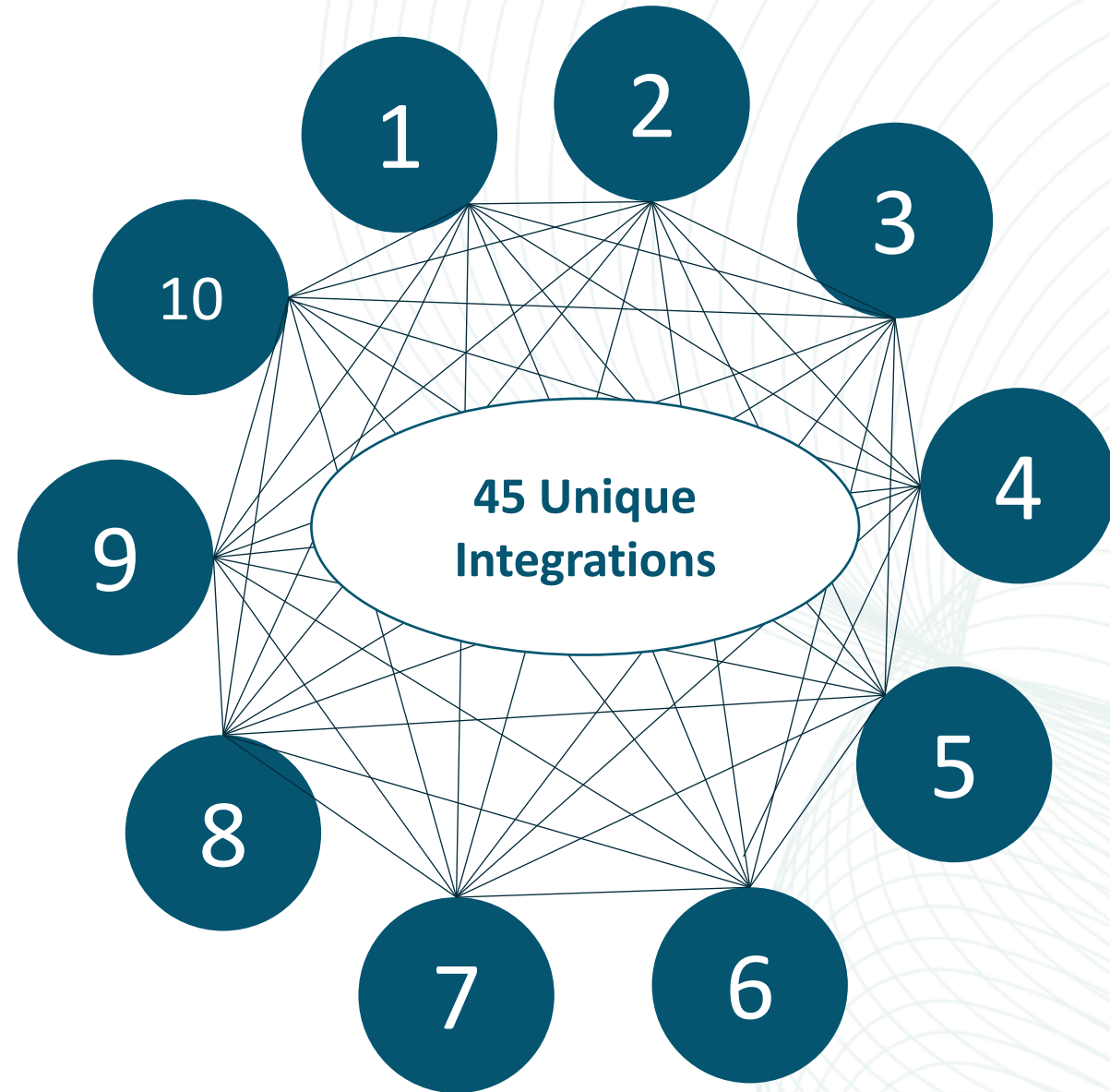


Customization

Customization refers to adapting software systems to enable data exchange. This often involves creating custom connections to ensure different systems can communicate data effectively.

While this approach allows for highly specific solutions, it requires significant investment in both initial development and ongoing maintenance to ensure compatibility as systems evolve.

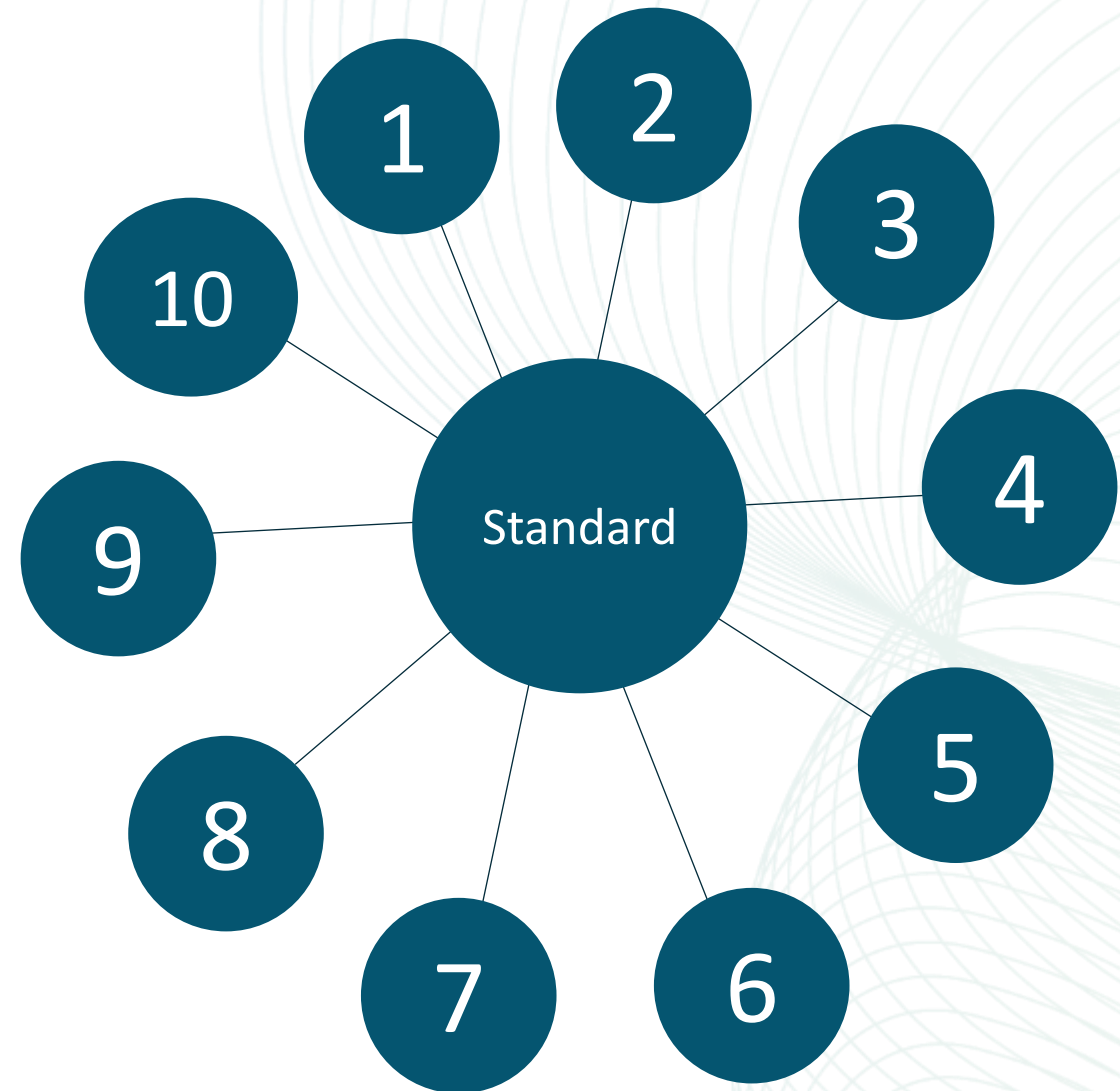
This is not possible in industries like seafood because, for example, **10 companies using different systems would require 45 unique integrations**, creating significant complexity and expense at scale.



Standardization

Standardization **establishes a uniform framework for data exchange**, enabling the development of **scalable tools and open-source resources** and supports seamless communication between systems.

When everyone follows the same standard, **any system adhering to it will be interoperable with any other**, reducing barriers and simplifying integration.



The GDST traceability standard defines:



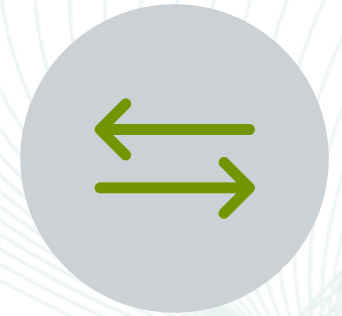
***WHAT DATA SHOULD BE
COLLECTED***



***WHEN THAT DATA
SHOULD BE COLLECTED***



***HOW DATA SHOULD BE
FORMATTED***



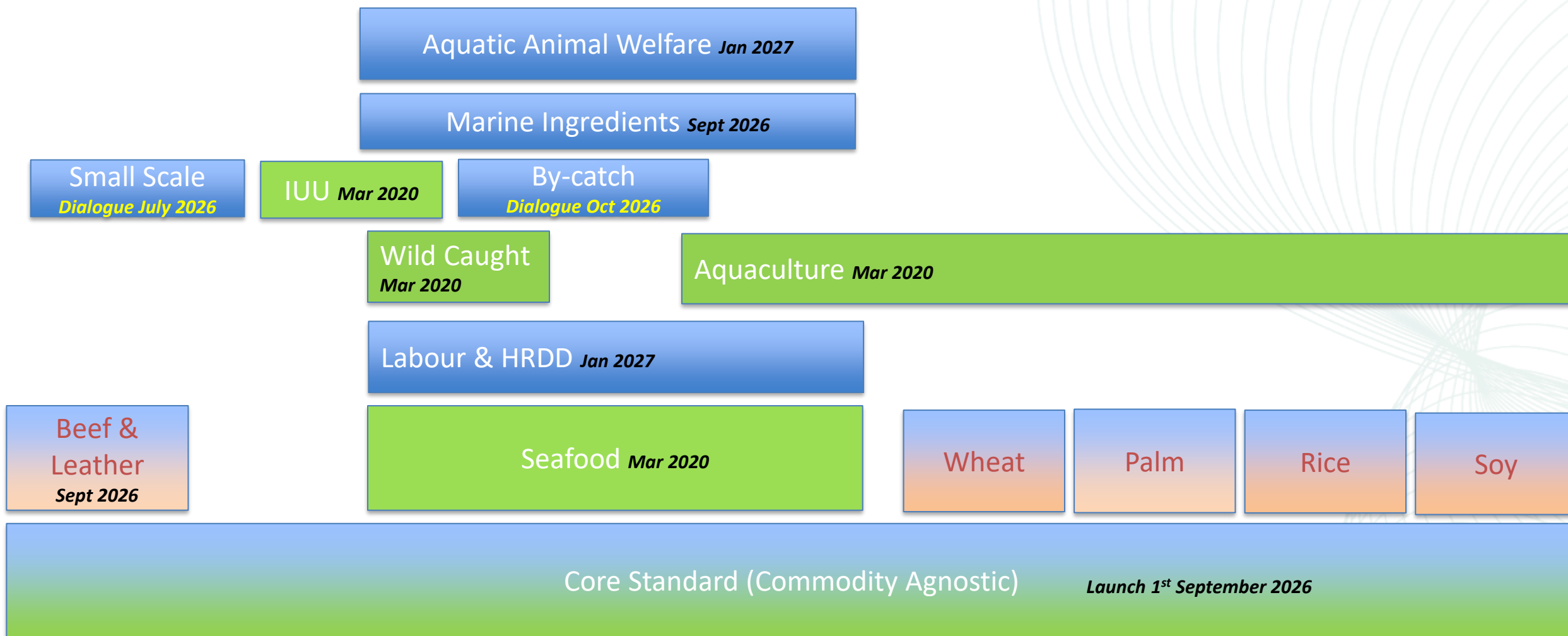
***HOW DATA SHOULD BE
SHARED***

We **do not** define **what solution** you use, **what data architecture** is used, **how you** decide to **send, receive and share data** or indeed **which data** you choose to collect – we solely create the **scalable global standard**

GDST CTEs & KDEs (wild capture)

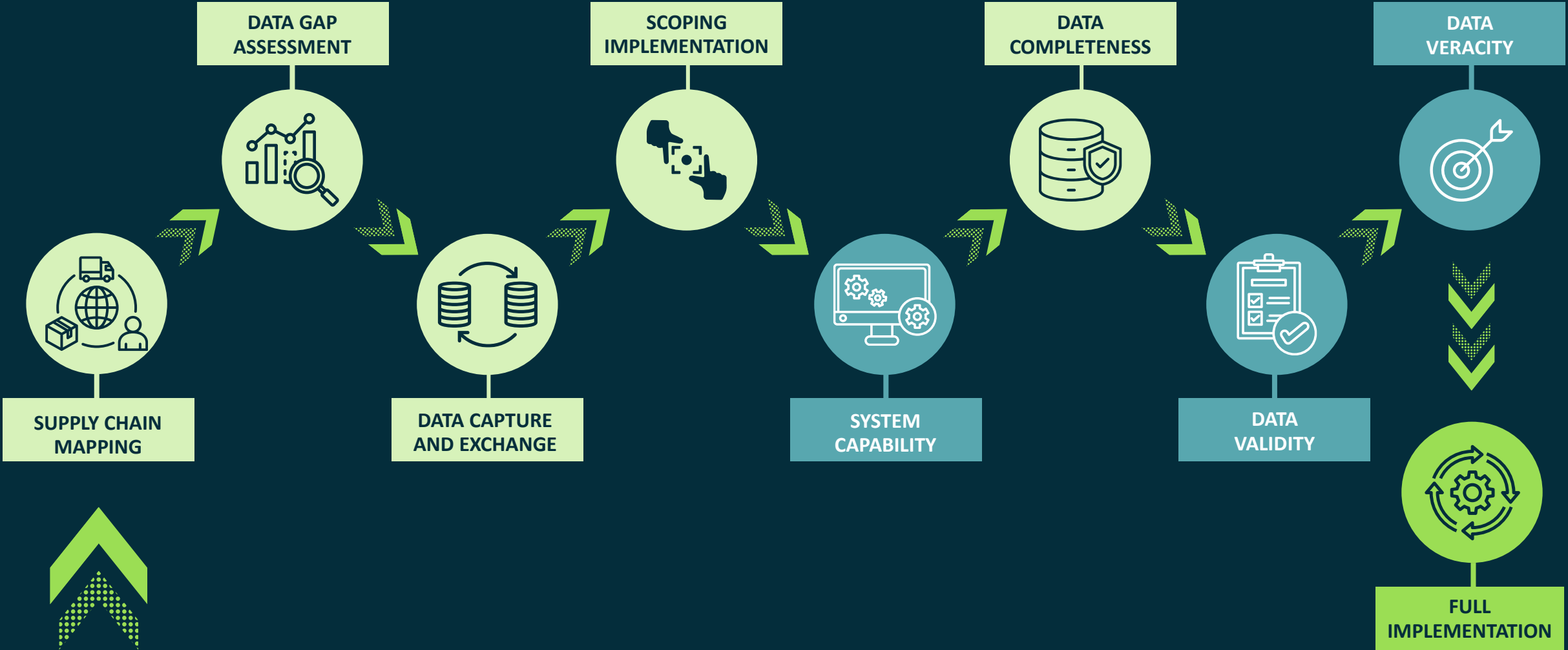
Fishing	On Vessel Processing	Transshipment	Landing	Aggregation/ Disaggregation	Shipping/Receiving	Processing
Who - Vessel name - Vessel registration - Unique vessel identification - Public vessel registry hyperlink - Vessel flag - Satellite vessel tracking authority - Product Ownership - Information Provider	Who - Vessel name - Vessel registration - Unique vessel identification - Public vessel registry hyperlink - Vessel flag - Product Ownership - Information Provider	Who - Transshipment Vessel Name - Transshipment Vessel Unique Vessel ID - Transshipment Vessel Registration - Transshipment Vessel Flag - Product Ownership - Information Provider	Who - Product Ownership - Information Provider	Who - Product Ownership - Information Provider	Who - Product Ownership - Information Provider	Who - Product Ownership - Information Provider
What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure	What - Species - Product form - Item/SKU/UPC/GTIN - Linking KDE (batch, lot, or serial number) - Weight or quantity - Unit of measure
Where - Availability of catch coordinates - Catch area - FIP - Event Read Point (Geo Location)	Where - Product Origin - Event Read Point (Geo Location)	Where - Transshipment Location - Event Read Point (Geo Location)	Where - Landing Location - Event Read Point (Geo Location)	Where Event Read Point (Geo Location)	Where - Event Read Point (Geo Location) - Source Location - Destination Location	Where - Product Origin - Event Read Point (Geo Location)
When - Vessel trip dates - Dates of capture - Event ID - Event Date, Time and Time Zone	When - Expiration/Production Date - Event ID - Event Date, Time and Time Zone	When - Dates of Transshipment - Event ID - Event Date, Time and Time Zone	When - Dates of Landing - Event ID - Event Date, Time and Time Zone	When - Event ID - Event Date, Time and Time Zone	When - Event ID - Event Date, Time and Time Zone	When - Expiration or Production Date - Event ID - Event Date, Time and Time Zone
IUU Specific - Gear type - Production method - Fishing authorization - Harvest certification - Existence of human welfare policy - Human welfare policy standards	IUU Specific - Chain of Custody Certification - Existence of Human Welfare Policy - Human Welfare Policy Standards	IUU Specific - Chain of Custody Certification - Transshipment Authorization - Existence of Human Welfare Policy - Human Welfare Policy Standards	IUU Specific - Landing Authorization - Existence of Human Welfare Policy - Human Welfare Policy Standards	IUU Specific Chain of Custody Certification	IUU Specific Chain of Custody Certification	IUU Specific - Chain of Custody Certification - Existence of Human Welfare Policy - Human Welfare Policy Standards

GDST Dialogue creates a Modular Standard Framework



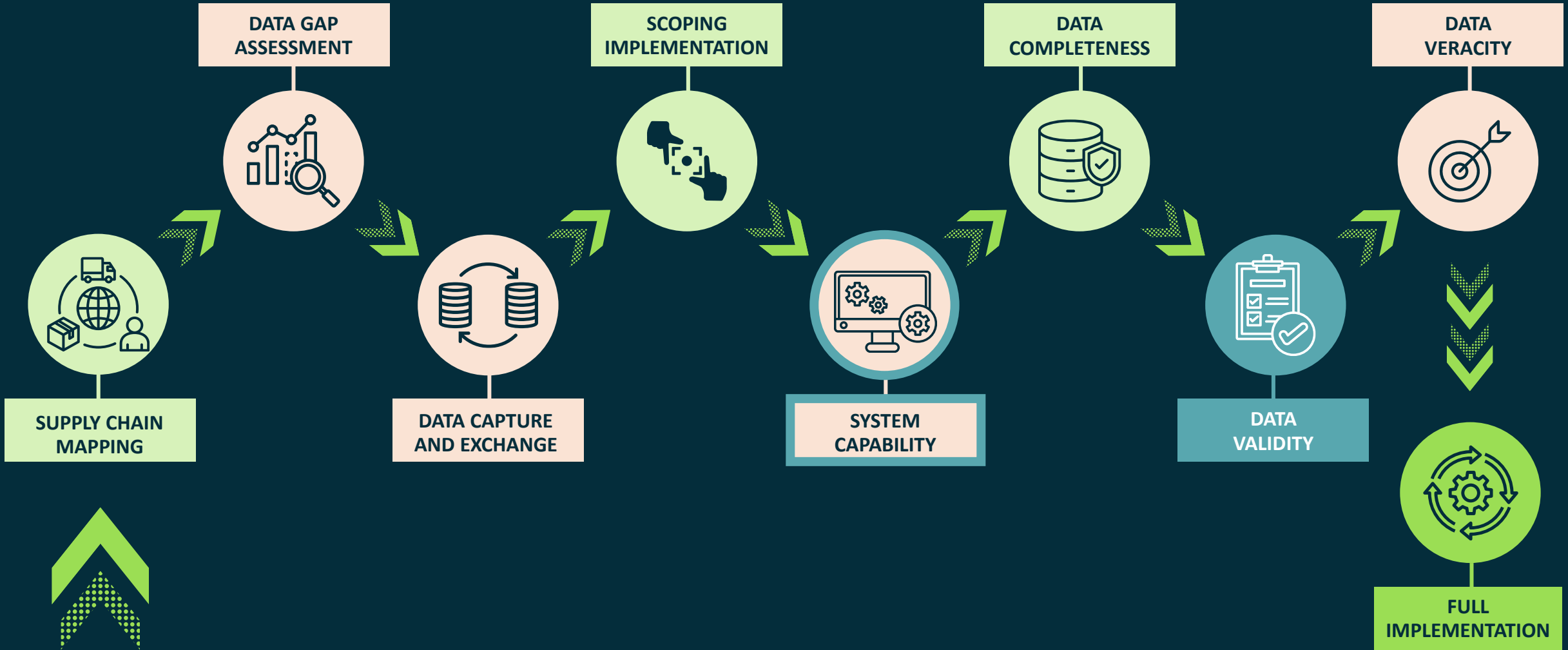
THE DIGITAL TRANSFORMATION JOURNEY **INDUSTRY**

- INDUSTRY LEAD
- GDST LEAD



THE DIGITAL TRANSFORMATION JOURNEY **GOVERNMENTS**

- INDUSTRY LEAD
- GOVERNMENT LEAD
- GDST LEAD
- GOVERNMENT & GDST LEAD



FAO journey & support for GDST

2017, Seafood traceability for fisheries compliance: catch documentation schemes – [report here](#) – key words: catch composition, fish products, food inspection, fish processing, capture fisheries, traceability, standardization, KDEs

2022, Understanding and implementing catch documentation schemes – [report here](#) – key words: marine fisheries, illegal practices, fishing methods, documentation, tracking, fishing vessels, fishery management, KDEs, GDST

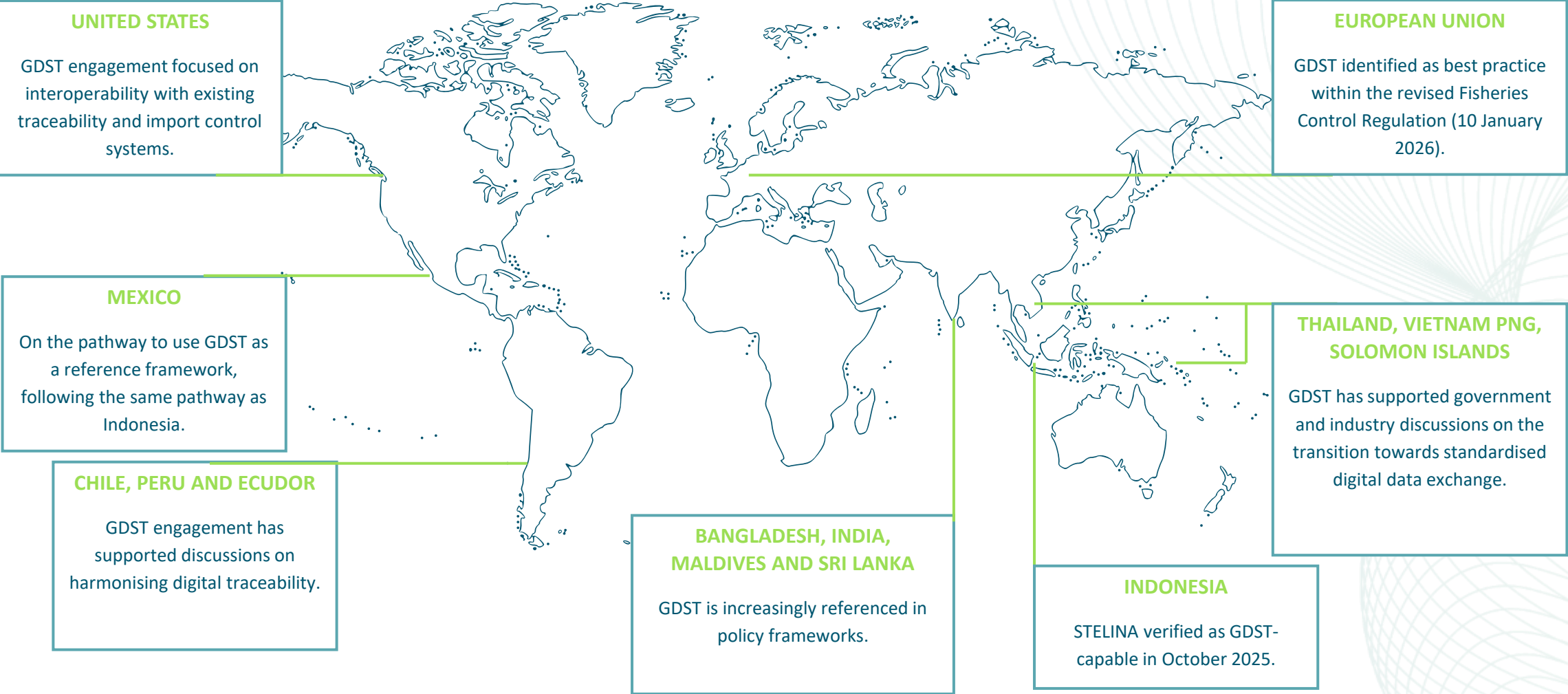
2023, Advancing end-to-end traceability: Critical tracking events and key data elements along capture fisheries and aquaculture value chain – [report here](#) – key words: capture fisheries, fisheries value chains, aquaculture production, traceability, KDEs/ CTEs, GDST

2024, FAO's State of World Fisheries and Aquaculture (SOFIA) – [report here](#) – key words: fish trade, sustainable fisheries, sustainable aquaculture, fishery management, value chains, KDEs/ CTEs, GDST



GLOBAL DIALOGUE
on Seafood Traceability

GOVERNMENT ENGAGEMENT AND POLICY INFLUENCE



Indonesia Leading the Way in GDST Standard Adoption

16th January 2025

Indonesia has taken a groundbreaking step by upgrading its national seafood traceability system, Stelina, to be compatible with the Global Dialogue on Seafood Traceability (GDST) Standard. This makes Indonesia, [one of the largest global seafood exporters](#), the first country to align a government-led system with international standards that ensure its seafood products meet the highest global traceability and sustainability requirements.

Indonesia's Stelina traceability system tracks seafood throughout its journey—from fishing boats to the final market—by capturing essential data about its origin, handling, and legality. This interoperable traceability—the ability for different systems to communicate and exchange data seamlessly— is crucial for combating illegal fishing, protecting marine ecosystems, and meeting the demands of global markets.

The Food and Agriculture Organization (FAO), has emphasized the importance of standardized traceability systems in ensuring sustainable fisheries and fair trade in its [State of World Fisheries and Aquaculture](#) report. By upgrading Stelina to align with the GDST Standard, Indonesia can now enable seamless data sharing between seafood businesses and government, ensuring seafood products are both sustainable and compliant with international trade standards around sustainability and safety. This provides greater reassurance to markets in the United States and Europe, where policy requirements and consumer demand are driving the need for full product traceability. The U.S. especially is a top importer, [purchasing \\$889.39 million of Indonesian seafood products](#) in the first half of 2024 alone, accounting for 38% of Indonesia's total seafood exports.

This achievement reflects Indonesia's global leadership in adopting cutting-edge technology to support responsible fisheries management, working alongside influential stakeholders in the country's seafood industry like the Indonesian Pole & Line and Handline Fisheries Association (AP2HI). It also highlights the growing recognition of the GDST Standard as a bridge between industry practices and government policies.





Applicability of GDST with Global Regulatory Initiatives

Major new regulations are creating strong requirements for digital, lot-based traceability



Canadian “boat to plate” ministerial level consultations

Government of Canada Launches Consultation on Boat-to-Plate Traceability For Fish and Seafood Products

Canadian Food Inspection Agency Seafood August 17, 2021

OTTAWA, ON – The Government of Canada is working in collaboration with Canada’s seafood industry to ensure they remain competitive in the global marketplace and to protect consumers and fisheries by preventing seafood fraud and taking action to stop illegal, unreported and unregulated fishing.

In support of the December 2019 mandate commitment to develop a boat-to-plate traceability program that will help Canadian fishers better market their high-quality products, the Canadian Food Inspection Agency (CFIA), along with Agriculture and Agri-Food Canada and Fisheries and Oceans Canada, is launching a consultation on a [discussion paper](#) that will inform the development of proposals to enhance boat-to-plate traceability of fish and seafood in Canada.

The discussion paper was developed after engaging with various stakeholders in the fish and seafood sector, including industry, Indigenous organizations, non-government organizations (NGOs), academia and other levels of government. The Government of Canada is now seeking feedback on this discussion paper from a broad range of stakeholders, including consumers. This consultation is an opportunity to review the traceability systems currently in place and to help understand how these may be further developed to better respond to stakeholder’s, including consumer and industry, needs.

Canadians and interested stakeholders are invited to share their views on 3 key themes



EUROPEAN COMMISSION

Brussels, 30.5.2018
COM(2018) 368 final

2018/0193 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Council Regulation (EC) No 1224/2009, and amending Council Regulations (EC) No 768/2005, (EC) No 1967/2006, (EC) No 1005/2008, and Regulation (EU) No 2016/1139 of the European Parliament and of the Council as regards fisheries control

{SEC(2018) 267 final} - {SWD(2018) 279 final} - {SWD(2018) 280 final}

EU Fisheries Control Regulation



Revision of Japanese anti-IUU regulations



FSMA Law Section 204

Non-seafood commodities

UN Global Compact sponsored initiative – Better Food Future

Interest from:

- Apparel
- Leather
- Beef
- Dairy
- Soy
- Palm
- Shea butter
- Durian

.... But why not any commodity that you want?



**OCEAN
STEWARDSHIP
COALITION**



"Fast food & fashionistas, take note! Traceability standards from the seafood industry are the ultimate 'cheat code' for beef & leather supply chains." Danielle Nierenberg, Food Tank

Non-Seafood Expansion

Global Traceability Framework for Beef and Leather

- Primary Use Case: Traceability to identify deforestation in cattle supply chains.
- Progress: Draft Traceability Standard and resources developed (aligned with GDST); Beef and leather stakeholders engaged.



THE UNIVERSAL
TRACEABILITY MODEL:
EVENT-BASED PRINCIPLES
FOR BEEF AND LEATHER
SUPPLY CHAINS

Example Critical Tracking Event

Example: Fine Leather Goods creates handbags from finished leather on June 5, 2024 Critical Tracing Event: Transform Into Finished Product Frequency: Data collected for each lot of finished products that are created.	Who: • Organization (Entity that owns event location) • Fine Leather Goods	What (Inputs): Finished leather • Product ID: 19654322569423 • Quantity: 180 • Unit of Measure: Sq Feet • Linking KDE (lot/batch/serial): 12302	What (Outputs): Handbag • Product Identification: 15655789625412 • Quantity: 20 • Unit of Measurement: Each • Linking KDE (lot/batch/serial): 060525
	Where: • Event Location ID: 5655789112432 • Event Location Address: 51 Orchard Road, Sacramento, CA • Event Location Name: Fine Leather Goods	When & Why: • Event Date & Time: 2025-06-05, 18:00 • Business Step: Transformation	Technical: • Event Read Point: Building #2 • Event ID: Transform 00068

UN Transparency Protocol

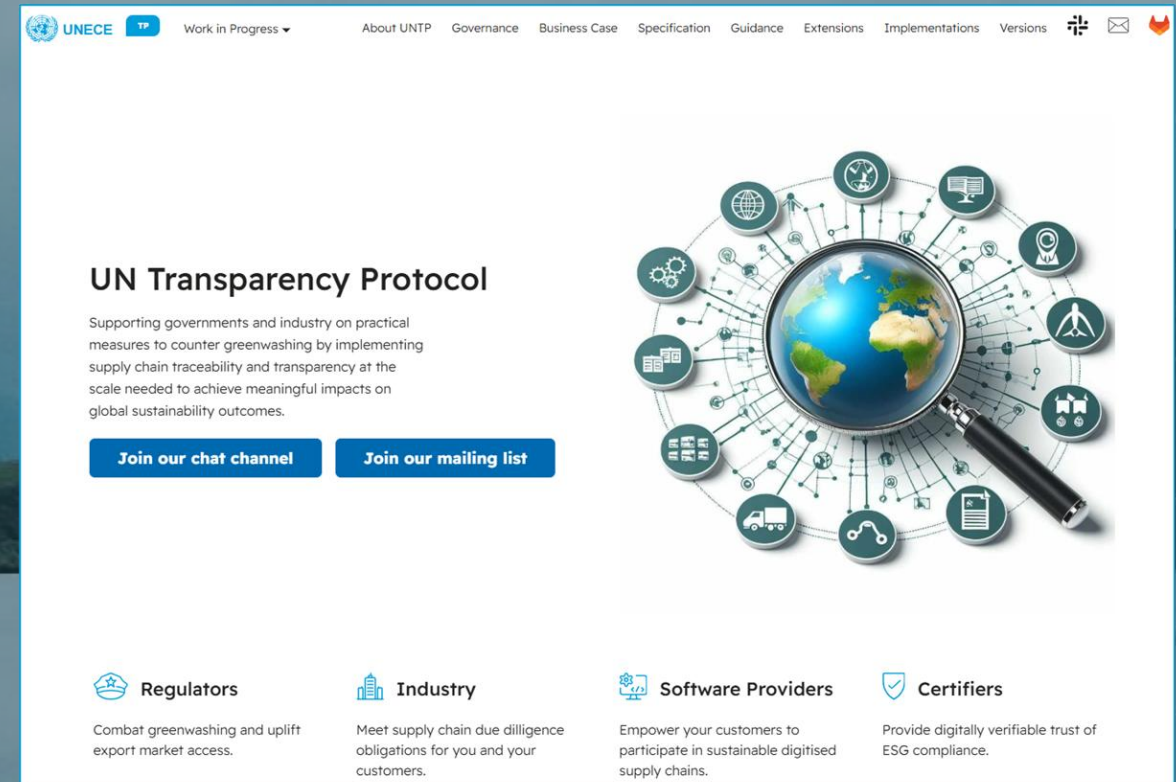
Established 2019 to deliver digital transparency for ESG reporting ~ link with DG Environment and EU Green Deal

Initially focused on textiles and collaborated on UN FLUX development

UN TP exploring Agri-foods and via beef came across GDST

Planning to launch Community Activation Programme for seafood with GDST leading Oceans module

Aligning UN TP 1.0 with GDST v2.0 and collaborate to replicate GDST approach in other commodities



The screenshot shows the homepage of the UN Transparency Protocol website. At the top, there is a navigation bar with the UNECE logo, a 'TP' badge, and a 'Work in Progress' dropdown menu. The main navigation links include 'About UNTP', 'Governance', 'Business Case', 'Specification', 'Guidance', 'Extensions', 'Implementations', and 'Versions'. On the right side of the header are icons for a grid, an envelope, and a social media icon. The main content area features a large graphic of a globe surrounded by various icons representing supply chain, technology, and sustainability. Below this graphic, the title 'UN Transparency Protocol' is displayed, followed by a paragraph: 'Supporting governments and industry on practical measures to counter greenwashing by implementing supply chain traceability and transparency at the scale needed to achieve meaningful impacts on global sustainability outcomes.' Two blue buttons are present: 'Join our chat channel' and 'Join our mailing list'. At the bottom, there are four columns representing different stakeholder groups: 'Regulators' (with a building icon), 'Industry' (with a factory icon), 'Software Providers' (with a gear icon), and 'Certifiers' (with a shield icon). Each column has a brief description of their role in the protocol.

UN Transparency Protocol

Supporting governments and industry on practical measures to counter greenwashing by implementing supply chain traceability and transparency at the scale needed to achieve meaningful impacts on global sustainability outcomes.

[Join our chat channel](#) [Join our mailing list](#)

Regulators
Combat greenwashing and uplift export market access.

Industry
Meet supply chain due diligence obligations for you and your customers.

Software Providers
Empower your customers to participate in sustainable digitised supply chains.

Certifiers
Provide digitally verifiable trust of ESG compliance.



GLOBAL DIALOGUE
on Seafood Traceability



Cross-cutting Global Trends relevant to GDST

Trend 1 – Digital Traceability Becomes Mandatory

The era of paper-based traceability is ending. Future systems increasingly require electronic records, digital chain of custody, data interoperability and near real-time reporting. The EU's revised fisheries control framework is a strong indicator of global direction.

Trend 2 – Human Rights Become Core Traceability Data

Historically the key question was: "Where was the fish caught?" Increasingly it is: "Who caught it? Under what labour conditions? Was forced labour involved?" CSDDD, modern slavery laws and customs enforcement are driving this shift.

Trend 3 – Traceability Extends Beyond Capture Fisheries

Requirements are increasingly covering aquaculture, feed supply chains, processing facilities, logistics providers and traders and brokers.

Trend 4 – Buyer-Driven Requirements Will Exceed Regulation

Major retailers, foodservice companies and seafood brands increasingly require vessel-level traceability, human-rights audits, digital product passports and ESG reporting. These commercial requirements often move faster than legislation.



Five Converging Regulatory Pillars & Cross-Cutting Trends

- **1. Legality & IUU Traceability**
 - EU IUU Regulation, SIMP, catch documentation systems
- **2. Food Safety Traceability**
 - FSMA 204, batch-level traceability, rapid recall capability
- **3. Human Rights Due Diligence**
 - CSDDD, Modern Slavery Acts, forced labour import bans
- **4. Biodiversity & Ecosystem Due Diligence**
 - MMPA, bycatch requirements, protected species controls
- **5. Digital Product Traceability & Data Exchange**
 - EU Fisheries Control Regulation, e-catch certificates, digital chain of custody
- **Trend 1 – Digital traceability becomes mandatory**
 - Paper-based traceability is ending; electronic records and near real-time reporting are becoming the norm.
- **Trend 2 – Human rights become core traceability data**
 - The key question shifts from “where was it caught” to “under what labour conditions.”
- **Trend 3 – Traceability extends beyond capture fisheries**
 - Requirements increasingly cover aquaculture, feed supply chains, logistics and traders.
- **Trend 4 – Buyer-driven requirements exceed regulation**
 - Retailers and brands increasingly require vessel-level and ESG data faster than legislation demands.

The direction of travel: from “where was this fish caught?” towards “can you prove it was legal, safe, responsibly produced and environmentally acceptable throughout its journey to market?”

The 2030 reality that GDST is focusing on:

Capability	Current Importance	Likely Importance by 2030
Catch documentation	High	Very High
Vessel identification	High	Very High
Digital chain of custody	Medium	Very High
Lot/batch traceability	High	Very High
Labour-risk assessment	Medium	Very High
Forced-labour due diligence	Medium	Very High
Supplier ESG screening	Medium	High
Rapid record retrieval	Medium	Very High
Interoperable digital data exchange	Low-Medium	Very High
Scope 3 and sustainability reporting	Medium	High

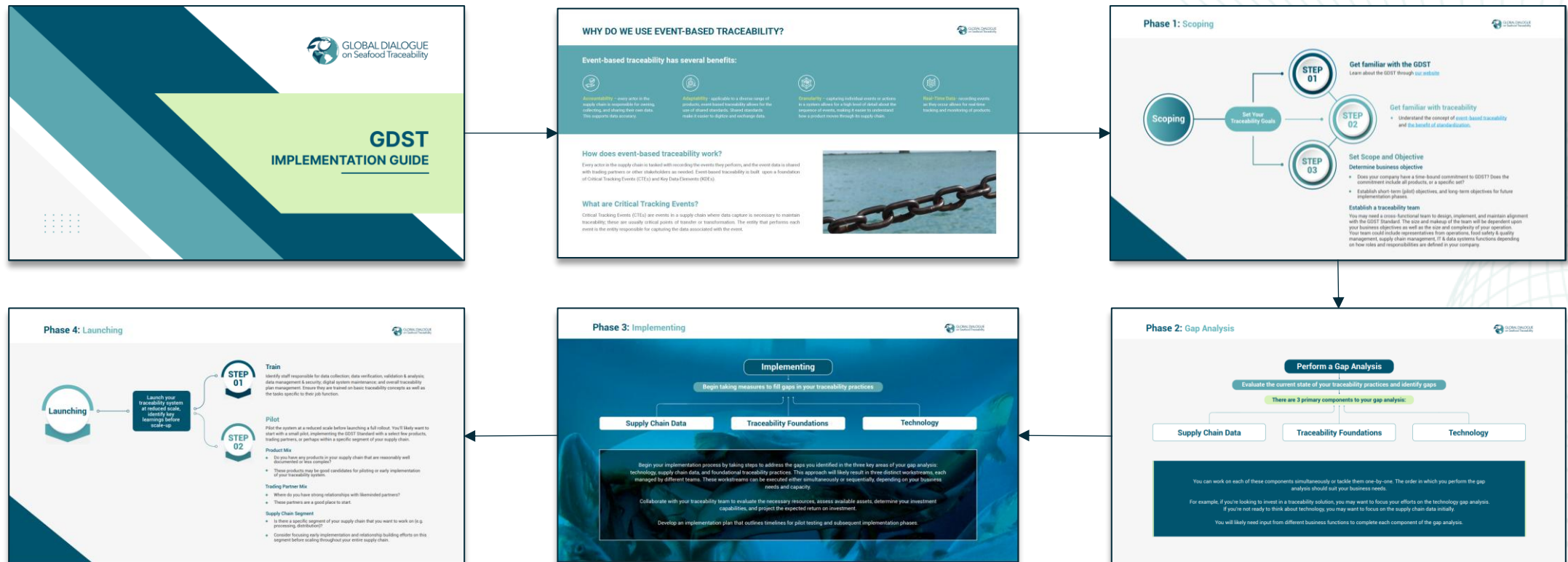
For most internationally traded seafood, the future compliance standard is likely to be: digital, end-to-end, auditable traceability linking vessel or farm origin, chain of custody, legality, labour conditions, environmental impacts and product movement from source to consumer – this needs governments, CSO and industry to work collaboratively together with standardized digital data!



GLOBAL DIALOGUE
on Seafood Traceability

Knowledge Content

GDST provides a comprehensive publicly available body of knowledge, including [technical standards](#), [educational materials](#), [implementation guidelines](#), and best practices to enhance interoperability and digital traceability across seafood supply chains. This content provides a framework for industry stakeholders to adopt standardized data-sharing protocols. Find more on the [GDST's website](#)



Technical Resources

The GDST provides resources to help organizations structure and exchange data consistently, ensuring interoperability across supply chains.

With practical guidance on data mapping, integration, and validation, the documentation simplifies the transition to standardized traceability, making it easier for developers to implement and maintain GDST-aligned solutions.

[Traceability Standards Key Concepts](#)

- Including a guide with common traceability terms and definitions

[GDST Event Based Traceability Guide](#)

- Easy to follow table with all the GDST CTE's and KDEs

[Implementation Guide](#)

- Breaks down the five phases for implementation

Global Dialogue on Seafood Traceability

RESOURCES FOR TECHNICAL PROFESSIONALS

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► **Additional resources:**

- Identifiers video can be found [here](#), you can access it with the password "IFTGFTC"
- [GDST URN Registration](#)
- [EPCIS 2.0 Artifacts](#) - These are additional files for the EPCIS 2.0 standard such as the EPCIS 2.0 JSON-LD Schema which can be used to validate the JSON-LD format.
- [EPCIS 2.0 Example Files](#) - These are example files from the EPCIS 2.0 core standard provided by GS1.

► **Open-Source Software Development Kits:**

These open-source [Software Development Kits \(SDKs\)](#) supports developers with the transition to the requirements of the GDST 1.2 Standard and make it easier for solutions to become GDST-Capable. The SDKs contain Models, Mappers, and Utility Code for specific functions and executing the communication protocol. SDKs are currently available in C# and Java.

► **EPCIS Resources:**

We recommend that users first read the entire EPCIS documentation and the CBV documentation, however we have included references to key sections to start with:

- [EPCIS 2.0 Standard](#) - Focus on section 7.
- [EPCIS 2.0 CBV](#) - Focus on sections 3, 6, 7, 8, and 9.
- [GDST URN Registration](#) - This is our official URN registration for GDST identifiers. This will show you how to build a GDST identifier for an EPC, GTIN, GLN, PGLN, etc. without a GS1 Company Prefix.

► **GDST Standard Documentation:**

The CTE / KDE matrix which defines what information will be recorded.

- [Core Normative Standard](#) - Lays out the CTE / KDE matrix in Section 2.1
- [Basic Universal KDE List](#) - Lays out a list of the KDEs in the Wild and Aquaculture tabs.

► **Background and examples on the JSON-LD format:**

The [EPCIS 2.0 standard](#) which describes the JSON-LD format.

► **Information on the communications protocol:**

- The [developer documentation](#) outlines how the communication protocol works at a technical level.
- Section 2 of the [GDST technical standard](#) outlines how the communication protocol works.

► **GDST Capability Test:**

The Capability Test is used to determine if a traceability system has implemented all aspects of the GDST standard, including the ability to send and receive the complete CTE/KDE and master data set, in the correct format, using the required communications protocol.

- **Once you have signed up for the Capability Test**, you will have access to the [Check Tool](#) which can be used for checking an JSON-LD document for schema validation and completeness - a preliminary step to running the full GDST capability test.
- The developer documentation outlines how the test is taken for full chain, first mile wild, or first mile aquaculture. **Please reach out to info@thegdst.org to register for the Capability Test.**
- Once a solution passes the test, it is listed on the [GDST website](#).

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03 RESOURCES FOR TECHNICAL PROFESSIONALS - GLOBAL DIALOGUE ON SEAFOOD TRACEABILITY



Automated Tests and Analytical Tools

Capability Test

A test to check if a traceability software meets the GDST interoperability standard. Passing this test should be a basic requirement when choosing a new system. You can find software that has passed the test on the GDST [website](#)

Diagnostic Tool — to determine the real-life problems of capable solutions which includes timeouts, coding issues and data entry problems

Completeness Tool

Once a company is using a system that has passed the Capability Test, they can use the [Completeness Tool](#) to check how complete their seafood supply chain data is. This check looks at specific products over a set time period and compares the company's data—and the data from its supply chain partners—against the GDST Key Data Elements (KDEs).

Traceability Driver — assists with schema mapping that reduces development time needed to pass the capability test

Quantum Leap Tool — Identifies CTEs in documents and puts the identified KDEs from PDF, excel, email and other digital documents into CSV file for ingestion

GDST Assessment Results

Company	Test Partner
Date	1/15/2025
Query Date Range	1/1/2021 - 1/1/2023
Facility GLN	urn:gdst:example.org:location:locimporter.123u

EPCs	urn:gdst:example.org:product:lot:class:processor.2u.v1-0122-2022
Completeness	99.37%
Top 5 Failures	Certificate Complete, Event ID Complete, Event Time Complete, Event Location Complete, Event Location Master

Analyzed Products

Num. of Products: 1

99.37% Completeness

Can of Tuna

GTIN	urn:gdst:example.org:product:class:processor.2u
EPC	urn:gdst:example.org:product:lot:class:processor.2u.v1-0122-2022



Digitally Signed Results
Please scan the QR code

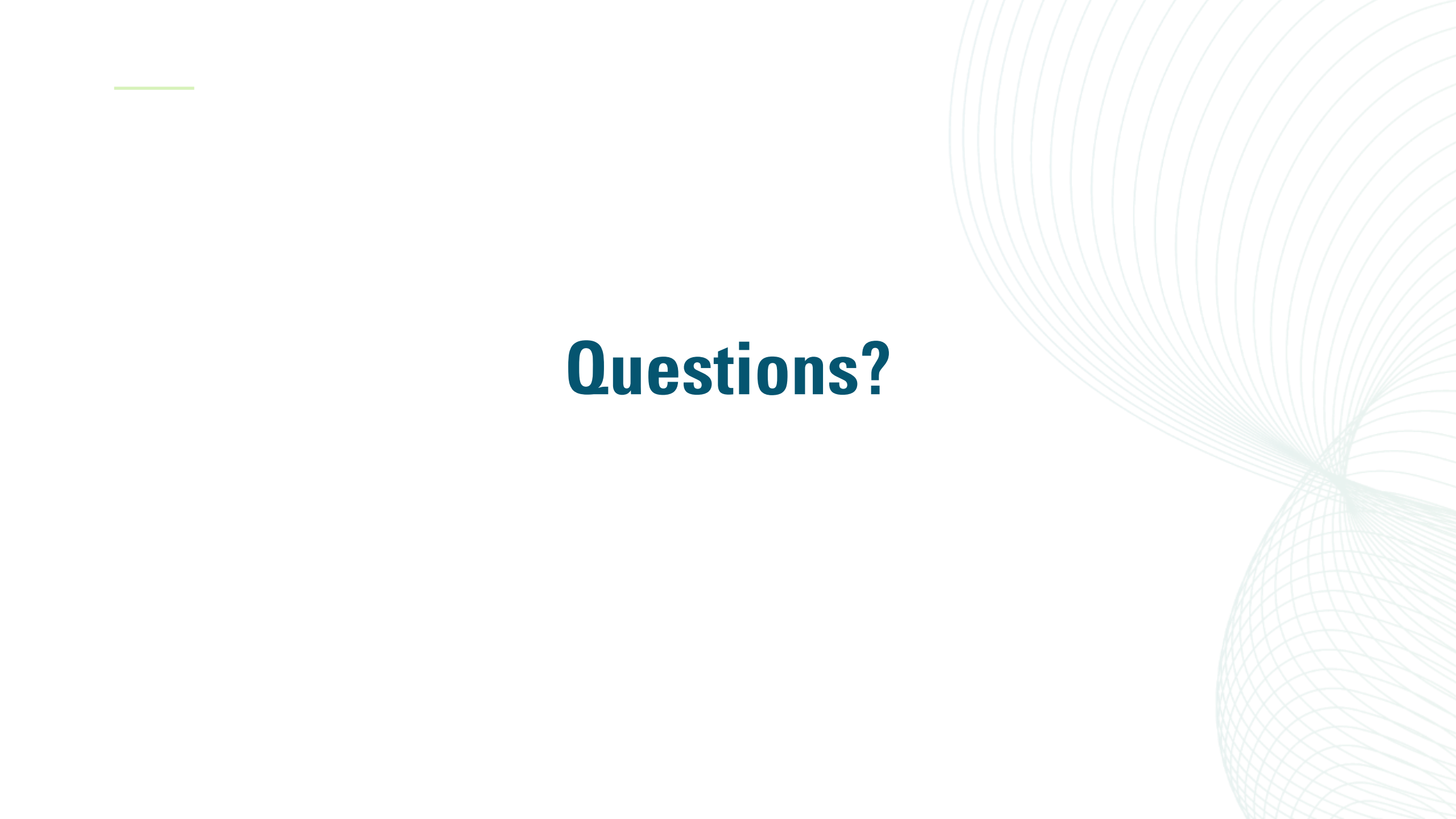
Breakout Groups

Question 1

If you believe your government could benefit from adoption and implementation of the GDST standard, what challenges might you face?

Question 2

What do you see today is the low hanging fruit in the move to digital fully traceable seafood?



Questions?

Thank you

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